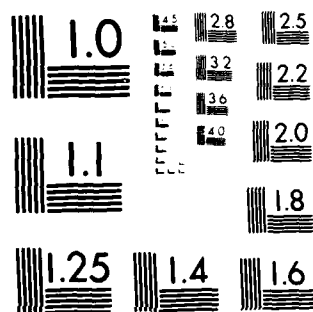


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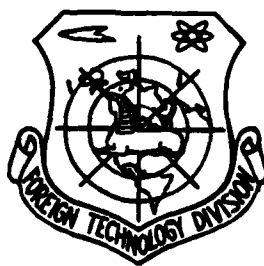
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A TURNING DEVICE IN HELICAL COIL ROASTERS FOR
COFFEE AND THE LIKE

by

Alexander Otto



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By: Alexander Otto

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A TURNING DEVICE IN HELICAL COIL ROASTERS FOR COFFEE AND THE LIKE

Alexander Otto, Dresden

Class 82a Patent; Patent Description Number 154553

The Kaiser's Patent Office

Published 12 November 1903, Patent effective in the German Imperial Realm subsequent to 10 February.

[[NOTE: "roasting material" refers to the material(s) to be roasted in the device.]]

The invention concerns a device to turn the roasting material in helical coil roasters for coffee and the like, and so to intermix [them] that the beans or grains constantly change their position and do not touch the hot walls of the tube on one side only.

In such helical tube roasters in which the roasting material runs through the tube windings sectionally, the danger is proximate that as a result of the small diameter of the tube, the roasting material becomes stuck together and the outer portions come in contact

with the walls more often than the beans or grains more to the middle.

Mixing devices in the form of simple inserts of wings in the tube would not be capable of removing this disadvantage. So as to now briskly swirl the roasting material among itself and to bring the beans or grains into contact with the tube walls uniformly and on all sides, according to the invention uniquely formed mixing wings are mounted, which are alternately distributed throughout the tube helix.

- The following are illustrated in the drawing:

Figure 1 shows one such Mixing Wing b obliquely mounted in Tube a, in cross-section;

Figure 2 shows the same as seen from the front; while,

Figure 3 exhibits the alternate positioning of the Mixing Wings with respect to one another and

Figure 4 represents a portion of the tube helix with installed Mixing Wings in the side view.

The Mixing Wings b, which are attached in Tube a by a Foot c,

have a half-round shape so that they fill one-half the tube. In the middle they possess a wave-form hollow which narrows downward, so as to reinforce the intermixing of the beans or grains of the roasting material.

These half-round Mixing Wings b are alternately installed in the tube such that their straight edges approximately cut at right angles [to one another]. Thus it is achieved that the beans or grains of the roasting material obtain a rotating motion and move forward in the line of the screw as a result of the helical shape of the tube. As a result of this, the roasting material is briskly swirled and the beans or grains which come into contact with the hot tube walls offer ever again a different portion of their outer surface due to the rotating motion.

In this manner, it is purported to be attained that no part of the roasting material remains in contact with the hot tube walls for longer periods and at the same site [of the bean or grain], and therefore sticks and burns. With installation of the turning device a much-more uniform browning of the entire roasting material is to be attained.

Claim of the Patent:

The turning device in helical tube roasters for coffee and the like is distinguished by the fact that in Tube a oblique Mixing Wings b of half-round shape are installed alternately such that they impart a rotating motion to the roasting material.

Fig. 1.

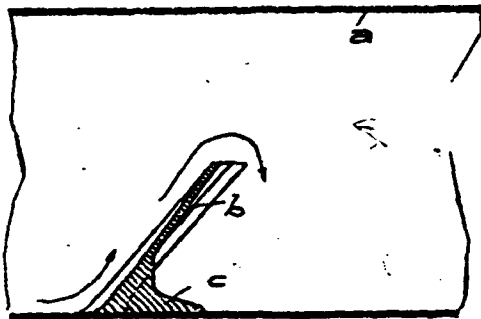


Fig. 2.

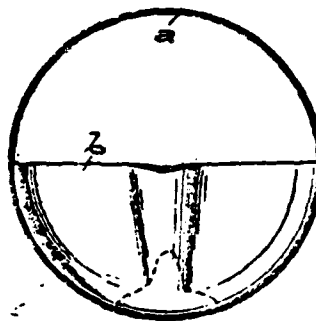


Fig. 3.

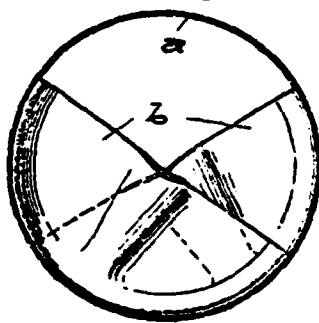
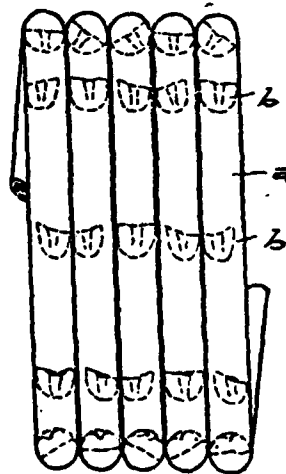


Fig. 4.



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